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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/524,117

02/10/2005

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06/09/2009

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EXAMINER

RAABE, CHRISTOPHER M

ART UNIT

PAPER NUMBER

2879

MAIL DATE

DELIVERY MODE

06/09/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |   |   |  |
|------------------------------|---|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/524,117    | <b>Applicant(s)</b><br>KASHIWAGI ET AL. |  |
|                              | <b>Examiner</b><br>CHRISTOPHER M. RAABE | <b>Art Unit</b><br>2879                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/18/09</u> .   | 6) <input type="checkbox"/> Other: _____                          |

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### **DETAILED ACTION**

Applicant's submission, filed 27 March 2009, has been entered and acknowledged by the examiner.

Applicant's arguments filed 27 March 2009 have been fully considered but they are not persuasive.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4,6-13,16 are rejected under 35 U.S.C. 103(a) as being unpatentable Tanaka et al. (JP 09-068605), in view of Taniguchi et al. (USPN 2003/0086030) and Richard (USPN 6421104).

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With regard to claim 1,

Tanaka et al. disclose in at least figure 1 and paragraphs 6,7, a lens array sheet (1) having a plurality of pyramid-shaped features (3) on a surface of its transparent base material film (4). The phrase "said plurality of pyramid shaped-recesses condense light from a backlight of a display device" does not structurally distinguish the claimed array sheet from the prior art, as is required of apparatus claims. While Tanaka et al. do not disclose the features to be recesses and do not disclose the relationship between length and spacing, Richard does disclose in at least figure 1 and column 2 lines 55-65 the features to be pyramidal recesses, allowing the sheet to be more easily joined with additional sheets, and Taniguchi et al. do disclose in at least paragraphs 54 and 55 a width "s" (D4) between adjacent features to be more than 0% and not more than 50% of a length "a" of the features, improving brightness. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the structure of Richard and the length-spacing relationship of Taniguchi into the lens array sheet of Tanaka et al. in order to improve brightness and permit the sheet to be more easily joined with additional sheets.

With regard to claim 2,

Tanaka et al. disclose the lens array sheet as set forth in claim 1, wherein a bottom surface of the pyramid shape is a rectangular or square shape satisfying a relationship of  $(\text{length "a" of one side}) \leq (\text{length "b" of other side}) \leq 10a$ .

With regard to claim 3,

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Tanaka et al. disclose the lens array sheet as set forth in claim 2, wherein the length "a" of one side of the bottom surface of the pyramid shape is 0.1  $\mu\text{m}$  to 20  $\mu\text{m}$ .

With regard to claim 4,

Tanaka et al. disclose the lens array sheet as set forth in claim 3, wherein a height "c" of the pyramid shape is  $0.2a \leq c \leq 2a$  with respect to the length "a".

With regard to claim 6,

Tanaka et al. disclose the lens array sheet as set forth in claim 1, wherein a base angle  $\theta$  of side surfaces of the pyramid shape is  $20^\circ$  to  $80^\circ$ .

With regard to claim 7,

Tanaka et al. disclose additionally in paragraph 10, the lens array sheet as set forth in claim 1, wherein the transparent base material film is composed substantially of an alicyclic olefin resin.

With regard to claim 8,

Tanaka et al. disclose the lens array sheet as set forth in claim 7, wherein the alicyclic olefin resin is a norbornene based polymer or a vinyl alicyclic hydrocarbon polymer.

With regard to claim 9,

Tanaka et al. disclose the lens array sheet as set forth in claim 1. The phrase produced by injection molding using a mold having pyramid-shaped projections or recesses on its

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surface” does not structurally distinguish the claimed invention over the prior art, as is required of apparatus claims.

With regard to claim 10,

Tanaka et al. disclose in paragraph 11, a mold providing a lens array sheet, and provided with pyramid shaped projections on its surface. The phrases “made by a metal layer” and “wherein said metal layer is obtained by forming a metal layer on said pattern of a substrate formed with a pyramid-shaped concave pattern and peeling the metal layer from the substrate” do not structurally distinguish the claimed invention over the prior art, as is required of apparatus claims. The obviousness of the lens sheet of claim 1 over Tanaka et al. in view of Taniguchi et al. was addressed in the rejection of claim 1.

With regard to claim 11,

Tanaka et al. disclose the mold. The phrase “made by silicon formed by (1) a step of forming a positive type resist pattern on a silicon wafer formed on its surface with a silicon oxide layer, (2) a step of forming a silicon oxide pattern by performing etching on the silicon oxide layer by an etching solution containing hydrofluoric acid by using the resist pattern as a mask, (3) a step of removing the resist pattern and performing anisotropic etching on the silicon wafer surface by an alkaline solution to form pyramid-shaped recesses, and (4) a step of removing the silicon oxide pattern by an etching solution containing hydrofluoric acid is used” does not structurally distinguish the claimed invention over the prior art, as is required of apparatus claims.

With regard to claim 12,

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Tanaka et al. disclose in at least paragraph 11, a mold made by a metal layer and provided with pyramid shaped projections on its surface. The phrase “wherein said metal layer is obtained, by using the mold as set forth in claim 10 or 11, by forming a metal layer on a surface of the mold and peeling the metal layer from the mold” does not structurally distinguish the claimed invention over the prior art, as is required of apparatus claims..

With regard to claim 13,

Tanaka et al. disclose a light condensing plate (1) composed of a lens array sheet as set forth in claim 1.

With regard to claim 16,

Tanaka et al. disclose in at least figure 1 and paragraphs 6,7, a lens array sheet (1) having a plurality of pyramid-shaped features (3) on a surface of its transparent base material film (4). The phrase “said plurality of pyramid shaped-recesses condense light from an organic electroluminescence material layer of a display device” does not structurally distinguish the claimed array sheet from the prior art, as is required of apparatus claims. While Tanaka et al. do not disclose the features to be recesses and do not disclose the relationship between length and spacing, Richard does disclose in at least figure 1 and column 2 lines 55-65 the features to be pyramidal recesses, allowing the sheet to be more easily joined with additional sheets, and Taniguchi et al. do disclose in at least paragraphs 54 and 55 a width “s” (D4) between adjacent features to be more than 0% and not more than 50% of a length “a” of the features, improving brightness. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the structure of Richard and the length-spacing relationship of

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Taniguchi into the lens array sheet of Tanaka et al. in order to improve brightness and permit the sheet to be more easily joined with additional sheets.

Claims 14,15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al.(as above), in view of Möller et al. (USPN 20030020399).

With regard to claim 14,15,

Tanaka et al. disclose a transparent substrate composed of a lens array sheet as set forth in claim 1.

While Tanaka et al. do not disclose the substrate to be used in conjunction with an organic electroluminescence element, Möller et al. do disclose in at least figure 2, an analogous substrate to be used with a display device having an organic electroluminescence element, comprising, a transparent electrode layer (14) stacked on the transparent substrate (102), an organic electroluminescence material layer (16) stacked on the transparent electrode layer (14), and a metal electrode layer (18) stacked on the organic electroluminescence material layer (16), providing a light source. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the OLED of Möller et al. with the substrate of Tanaka et al. in order to provide a light source.

### ***Response to Arguments***

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).



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Additionally while, the applicant argues that the references do not teach the pyramid-shaped recesses to condense light from an organic electroluminescence material layer or a backlight of a display device, the examiner asserts that these limitations do not structurally distinguish the claimed invention over the prior art, as is required of apparatus claims.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER M. RAABE whose telephone number is (571)272-8434. The examiner can normally be reached on m-f 7am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CR/

/NIMESHKUMAR D. PATEL/  
Supervisory Patent Examiner, Art Unit 2879